

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference DCH/LP5750195	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/GB 99/ 00260	International filing date (day/month/year) 26/01/1999	(Earliest) Priority Date (day/month/year) 28/01/1998
Applicant ROTHMANS INTERNATIONAL SERVICES LIMITED et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 2 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. ---

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☐ None of the figures.

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 6 A24B15/28 A24B15/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 6 A24B A24D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A ✓	GB 1 348 580 A (BRITISH AMERICAN TOBACCO COMPANY LIMITED) 20 March 1974 cited in the application see the whole document ---	1-5
A ✓	GB 1 512 352 A (IMPERIAL GROUP LIMITED) 1 June 1978 cited in the application see the whole document ---	1-4
A ✓	US 5 056 537 A (BROWN THOMAS W ET AL) 15 October 1991 see column 9, line 11 - line 39; claims ---	1,5,8
A ✓	EP 0 378 774 A (RJ REYNOLDS TOBACCO COMPANY) 25 July 1990 cited in the application see claims -----	

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

27 April 1999

Date of mailing of the international search report

07/05/1999

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Lepretre, F



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : A24B 15/28, 15/12	A1	(11) International Publication Number: WO 99/38396 (43) International Publication Date: 5 August 1999 (05.08.99)
(21) International Application Number: PCT/GB99/00260 (22) International Filing Date: 26 January 1999 (26.01.99) (30) Priority Data: 9801797.3 ✓ 28 January 1998 (28.01.98) GB (71) Applicant (for all designated States except US): ROTHMANS INTERNATIONAL SERVICES LIMITED [GB/GB]; 15 Hill Street, London W1X 7FB (GB). (72) Inventor; and (75) Inventor/Applicant (for US only): SAMPSON, John, Roger [GB/GB]; 74 Walnut Grove, Welwyn Garden City, Hertfordshire AL7 4EU (GB). (74) Agents: HARRISON, David, C. et al.; Mewburn Ellis, York House, 23 Kingsway, London WC2B 6HP (GB).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>
(54) Title: SMOKING ARTICLES (57) Abstract Use in the tobacco rod of a smoking article of tobacco mixed with a reconstituted tobacco sheet which includes activated carbon particles, surrounded by a paper of CORESTA 20 permeability or greater results in an article having reduced sidestream smoke and selective reduction of certain ingredients in mainstream smoke, whereby the smoker has a perception of increased smoothness.		

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece			TR	Turkey
BG	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MN	Mongolia	UA	Ukraine
BR	Brazil	IL	Israel	MR	Mauritania	UG	Uganda
BY	Belarus	IS	Iceland	MW	Malawi	US	United States of America
CA	Canada	IT	Italy	MX	Mexico	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NE	Niger	VN	Viet Nam
CG	Congo	KE	Kenya	NL	Netherlands	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NO	Norway	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	NZ	New Zealand		
CM	Cameroon			PL	Poland		
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba	KZ	Kazakstan	RO	Romania		
CZ	Czech Republic	LC	Saint Lucia	RU	Russian Federation		
DE	Germany	LI	Liechtenstein	SD	Sudan		
DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		

SMOKING ARTICLES

This invention relates to smoking articles such as cigarettes, cigars and cigarillos, and is concerned with the reduction of sidestream smoke from smoking articles. Sidestream smoke is that which is produced when the article is alight but not being drawn on by the smoker. Mainstream smoke is that which is generated when the smoking article is drawn on by the smoker; the chemistries of mainstream and sidestream smokes are different.

Sidestream smoke is perceived to be annoying to non-smokers, especially when a cigarette is left lying as for example in an ashtray, and any reduction in it is desirable. The modification of mainstream smoke affects the perception of the article by the smoker.

The present invention uses activated carbon to modify the smoke of a smoking article. Of course, activated carbon has been used in smoking articles, and for various purposes, virtually ever since its excellent adsorbent properties became known.

For example, the effects of various carbon contents of filters have been investigated by Williams et al in a report presented to the 5th General Assembly

of CORESTA, Vienna, October 1964 and reprinted in
Beiträge zur Tabakforschung, Vol. 3 part 3, pages 233-
242. This showed varying adsorbence of different
constituents of mainstream smoke by filter shreds of
5 different make-up. However we are concerned with
placing of carbon in the tobacco rod; that is, where it
is subjected to conditions very different from those in
a filter.

GB-A-1512352 shows the use of activated porous
10 particles of carbon adhered to tobacco in the tobacco
rod to affect mainstream smoke. GB-A-1348580 shows a
sheet of reconstituted tobacco material containing
activated carbon used as a main material for making
cigarettes which gave a reduction in particulates and
15 nicotine in mainstream smoke.

As far as we are aware at present the only
disclosure of the use of carbon in a tobacco rod in a
situation where reduction of sidestream smoke was aimed
for is in US-A-5092353 (EP-A-378774). However the aim
20 in that disclosure was to reduce sidestream smoke by
the use of wrapping paper of very low permeability (<
10 CORESTA units). To compensate for the tendency this
will cause for the cigarette to be self-extinguishing,
pyrolyzed alpha-cellulose was present in the tobacco

rod.

This pyrolyzed material was not subjected to any activating treatment. No mention is made of any chemical effect it might have on the smoke, and it probably has little or none because in the specific example the pyrolyzed material was cotton linters, which would give a comparatively low surface-area carbon.

The present invention, therefore, is contrasted with all of this prior art by providing in a tobacco rod an activated carbon for having an effect on the chemistry of smoke while not being limited to the use of low permeability papers, and specifically not to papers of < 10 CORESTA.

Furthermore, the present invention provides the addition of activated carbon in specific particulate form in reconstituted tobacco sheet to the tobacco rod of the smoking article in such a way that greater mildness of the smoking article is perceived by the smoker in the mainstream smoke, and at the same time there is a reduction in sidestream smoke over a wide range of porosities of the wrapper of the article and in particular with porosities high enough that special precautions do not have to be taken to prevent self-

extinction of the article.

Furthermore, the activated carbon particle should preferably be of vegetable origin since they will then contain minute traces of metals, which assist in the firm adsorption of (particularly) aldehydes from the smoke and indeed may chelate with such compounds. These are compounds the removal of which is particularly critical for improving mildness of perception of the article when smoked.

At the same time, however, the activated carbon does not diminish and may even increase certain beneficial volatile components of the smoke.

It is important to realise that as the "coal" of the smoking article progresses along the article, smoke components adsorbed by the particles are displaced from those particles minimally if at all. They are destroyed to gaseous oxides together with the material of the carbon particle itself by the extremely high temperatures (reaching up to about 800°C) generated in the coal.

The reconstituted tobacco sheet containing the activated carbon particles may be made by conventional techniques for making such sheets, which in their turn resemble conventional paper-making techniques, the

sheet then being shredded for incorporation with shredded tobacco which will be the material of the tobacco rod.

An important application of the present invention however will be in "roll your own" tobacco blends, i.e. those which are sold loose and which are wrapped in cigarette papers by the smoker.

The invention therefore includes within its scope a blend of shredded tobacco and of reconstituted tobacco sheet with the latter containing activated carbon.

The handling of the sheet, whether in shredding or in later manipulation either in a machine or by the smoker, may cause loss of carbon particles and the reconstituted tobacco sheet may be coated or sized in order to assist retention of the particles in it, and in particular the particles may themselves be micro-encapsulated before incorporation. This latter has the advantage of increasing the size of the particles and therefore their retention mechanically and the uniformity of size but, perhaps surprisingly, does not affect their activity.

Example 1

Cigarettes were made from a mixture of US flue-

cured and Burley tobaccos, cut rolled stem and expanded tobaccos, processed and cut to 32 cuts per inch ("cpi"). Incorporated in the shredded tobacco were 20% of a reconstituted tobacco sheet equally cut and
5 containing 30% of activated carbon particles from coconut, of mean particle size 37 μm and ranging in particle size from 0.5 μm to 150 μm . Control cigarettes were made identically but with the omission of the activated carbon particles.

10 The cigarettes were 84 mm long, 7.9 mm diameter, unfiltered. The wrapping was an 80 CORESTA flax-based paper, with 2% potassium citrate burn enhancer.

15 The cigarettes were subjected to smoking on a standard smoking machine and the mainstream smoke was analysed for vapour phase and semi-volatiles content with the results shown in Tables 1 and 2.

20 As seen in Table 1, there was a striking diminution, selective in character, of certain aldehydes and ketones and in particular of acrolein and butyraldehydes, the removal of which is important for mildness of taste. On the other hand, there was an actual increase as compared to the standard in certain ingredients, and in particular limonene, which are

regarded as beneficial to the taste.

X A similar reduction though less selective is
seen in the semi-volatiles as shown in Table 2.

Example 2

5 Cigarettes and controls were prepared using the
same tobacco blend and reconstituted tobacco sheet as
in Example 1, but using respectively papers of 25, 50,
80 and 180 CORESTA units porosity. Sidestream smoke
from the inventive cigarettes and from the controls had
10 significant reductions both in semi-volatiles and in
nicotine content, as seen in Table 3. Increased carbon
monoxide and carbon dioxide production is assumed to be
due to the presence of the particulate carbon in the
tobacco sheet.

TABLE 1**VAPOUR PHASE ANALYSIS, RESULTS SUMMARY**

(Non-ISO 4387 conditions)

Component	Relative Peak Area				Test as % of Control
	Control		Test		
	Mean	RSD	Mean	RSD	
Isoprene	30.8	3	30.6	4	100
Limonene	2.3	33	2.6	17	114
Benzene	16.9	5	16.5	3	97
Toluene	26.7	9	27.3	4	102
Ethylbenzene	4.1	18	4.5	8	108
m-+p-Xylene	6.0	19	6.7	8	112
o-Xylene	1.4	21	1.6	9	112
Styrene	1.5	28	1.7	14	112
Acetaldehyde	9.4	4	9.3	3	98
Propionaldehyde	2.6	7	2.5	7	97
Acrolein	3.5	4	3.2	5	92
n-Butyraldehyde	0.48	5	0.44	4	91
iso-Butyraldehyde	1.3	4	1.2	4	91
Crotonaldehyde	2.6	9	2.5	6	98
2-Furaldehyde	1.5	37	1.8	20	114
Acetone	110.2	4	99.0	4	90
Methylethylketone	29.5	5	26.8	4	91
3-Methyl-2-butanone	1.6	7	1.5	5	95
Diacetyl	55.1	5	50.2	3	91
2-Pentanone	0.27	6	0.25	4	94
2,3-Pentanedione	3.3	9	3.2	5	95
Cyclopentanone	2.2	18	2.2	18	101
Furan	5.7	3	5.4	4	95
2-Methylfuran	3.9	4	3.9	3	99
2,5-Dimethylfuran	6.3	6	6.4	3	101
Acetonitrile	12.9	6	12.6	5	98
Propionitrile	2.5	7	2.5	4	98
n-Butyronitrile	2.5	8	2.5	12	102
iso-Butyronitrile	1.1	7	1.1	5	96
Methacrylonitrile	0.79	4	0.80	5	102
Pyridine	1.3	43	1.5	20	115
1-Methylpyrrole	1.4	12	1.5	6	107
Methyldisulphide	0.62	8	0.56	8	91
Thiophene	0.19	6	0.19	4	98
Replicates	12		11		

Highlighted values are statistically significantly different at a 95% confidence limit
(Student-t Test, two-tail)

TABLE 2
SEMIVOLATILES ANALYSIS, RESULTS SUMMARY

Component	µg/CIGARETTE				Test as % of Control
	Control		Test		
	Mean	RSD	Mean	RSD	
Limonene	21.9	13	20.8	10	95
Naphthalene	2.0	3	1.9	5	95
1-Methylnaphthalene	1.1	3	1.1	5	99
2-Methylnaphthalene	1.6	6	1.6	4	99
Neophytadiene	127.2	7	108.8	3	85
Myosmine	9.3	4	10.1	3	109
Pyrrole	11.3	6	9.6	6	85
2-Acetylpyrrole	3.9	5	3.6	4	92
Indole	9.8	3	9.0	4	91
2-Furaldehyde	51.1	5	41.8	5	82
2-Acetylfuran	8.6	9	7.2	4	83
2-Furanmethanol	43.4	7	37.2	7	86
5-Methyl-2-furfural	25.9	9	22.6	6	87
5-Hydroxymethyl-2-furfural	118.7	3	105.4	4	89
α-Angelicalactone	23.0	7	19.4	13	84
Phenol	79.5	4	71.9	4	90
o-Cresol	17.3	4	14.9	3	86
p-Cresol	27.5	4	24.6	4	89
m-Cresol	12.0	3	10.5	4	88
2,3,6-Trimethylphenol	0.6	15	0.5	6	84
Pyridine	13.0	14	13.2	7	102
Triacetin	n/d		n/d		
TEGDA	n/d		n/d		
Propan-1,2-diol	126.6	69	85.3	43	67
Puffs/cig:	9.0	2	8.9	1	98
TPM (mg/cig):	17.9	3	15.5	3	87
Replicates	12		12		

n/d - not detected

Detection limits: Triacetin and TEGDA 1 μg /cigarette

Highlighted values are statistically significantly different at a 95% confidence limit
 (Student-t Test, two-tail)

TABLE 3

Sidestream measurements

	SAMPLE	NFDPM (mg/cig)	% REDUCTION	NICOTINE (mg/cig)	% REDUCTION	CO (mg/cig)	CO ₂ (mg/cig)
25 CORESTA	CONTROL	30.1	-	7.00	-	76.3	634
	TEST	25.5	15.3	5.74	18.0	80.5	626
50 CORESTA	CONTROL	32.5	-	6.55	-	70.6	612
	TEST	28.4	12.6	6.07	7.3	76.1	682
80 CORESTA	CONTROL	29.1	-	7.09	-	81.9	629
	TEST	27.5	5.5	6.21	12.4	74.1	672
180 CORESTA	CONTROL	33.9	-	7.03	-	77.6	630
	TEST	27.5	18.9	6.07	13.7	73.6	653

CLAIMS

1. A smoking article having a tobacco rod which comprises blend of shredded tobacco and shredded reconstituted tobacco sheet, the reconstituted tobacco sheet containing activated carbon particles, and a wrapper around the tobacco rod, the wrapper having a permeability of 20 CORESTA or greater.

2. An article according to claim 1 in which the activated carbon particles are of vegetable origin.

3. An article according to claim 2 wherein the vegetable origin is coconut.

4. An article according to claim 1, claim 2 or claim 3 wherein the carbon particles have a mean particle size of about 37 μ m.

5. A method of producing a smoking article with reduced sidestream smoke and increased perceived mildness during smoking which includes using for the tobacco rod of the article shredded tobacco and shredded reconstituted tobacco sheet containing activated carbon particles, and as the wrapper of the smoking article a material having a permeability of 20 CORESTA or greater.

6. A method according to claim 5 including hand-rolling the smoking article.

7. A method according to claim 5 or claim 6 which involves preferential reduction in the aldehyde content of mainstream smoke.

8. A kit for hand-rolling a smoking article with
5 reduced sidestream smoke and increased perceived mildness during smoking which includes for the tobacco rod of the article shredded tobacco and shredded reconstituted tobacco sheet containing activated
10 carbon particles, and as the wrapper of the smoking article a material having a permeability of 20 CORESTA or greater.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 99/00260

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 A24B15/28 A24B15/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 A24B A24D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB 1 348 580 A (BRITISH AMERICAN TOBACCO COMPANY LIMITED) 20 March 1974 cited in the application see the whole document ---	1-5
A	GB 1 512 352 A (IMPERIAL GROUP LIMITED) 1 June 1978 cited in the application see the whole document ---	1-4
A	US 5 056 537 A (BROWN THOMAS W ET AL) 15 October 1991 see column 9, line 11 - line 39; claims ---	1,5,8
A	EP 0 378 774 A (RJ REYNOLDS TOBACCO COMPANY) 25 July 1990 cited in the application see claims -----	

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier document but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
"&" document member of the same patent family

Date of the actual completion of the international search

27 April 1999

Date of mailing of the international search report

07/05/1999

Name and mailing address of the ISA
European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Lepretre, F

INTERNATIONAL SEARCH REPORT

information on patent family members

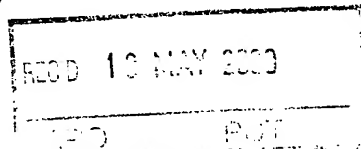
International Application No

PCT/GB 99/00260

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 1348580 A	20-03-1974	AU 4252572 A	22-11-1973
		BE 784229 A	18-09-1972
		CA 961367 A	21-01-1975
		CH 554653 A	15-10-1974
		DE 2227833 A	15-02-1973
		DK 130037 B	16-12-1974
		FI 51756 B	31-12-1976
		NL 7207771 A	13-12-1972
		US 3805803 A	23-04-1974
		ZA 7203459 A	28-03-1973
GB 1512352 A	01-06-1978	NONE	
US 5056537 A	15-10-1991	NONE	
EP 378774 A	25-07-1990	US 4942888 A	24-07-1990
		JP 2283271 A	20-11-1990
		US 5092353 A	03-03-1992


PATENT COOPERATION TREATY

PCT



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference DCH/LP5750195		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB99/00260	International filing date (day/month/year) 26/01/1999	Priority date (day/month/year) 28/01/1998	
International Patent Classification (IPC) or national classification and IPC A24B15/28			
Applicant [ROTHMANS INTERNATIONAL SERVICES LIMITED et al.] BRITISH AMERICAN TOBACCO			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input checked="" type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application 			
Date of submission of the demand 23/08/1999		Date of completion of this report 09.05.2000	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized officer Pille, S Telephone No. +49 89 2399 2097	



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB99/00260

I. Basis of the report

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

Description, pages:

1-10 as originally filed

Claims, No.:

1-12 as originally filed

Drawings, sheets:

1/1 as originally filed

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB99/00260

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-8
	No:	Claims	
Inventive step (IS)	Yes:	Claims	3, 4
	No:	Claims	1, 2, 5-8
Industrial applicability (IA)	Yes:	Claims	1-8
	No:	Claims	

2. Citations and explanations

see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

ad V

- 1). The present application does not meet the requirements of Article 33(3) PCT, because the subject-matter of claim 1 is not inventive.

GB-A-1348580 discloses a smoking article (claim 1) having a tobacco rod (claim 10: cigarette) which comprises a blend of shredded (p. 2, l. 23: cut; p. 3, l. 31: shredded) tobacco and shredded reconstituted tobacco sheet (p. 1, l. 13-17; claim 8), the reconstituted tobacco sheet containing activated carbon particles (p. 1, l. 20), and a wrapper around the tobacco rod (claim 10: cigarette).

The subject-matter of claim 1 differs therefrom in that it is specified that the wrapper has a permeability of 20 CORESTA or greater. In the claim it is not specified whether net or inherent permeability is meant.

This difference cannot be considered as inventive since it is known from US-A-5056537 (claim 4: net permeability > 50 CORESTA) that it is advantageous to use such wrappers. It is considered that the skilled man would readily combine both cited documents since both relate to smoking articles having a blend of tobacco and reconstituted tobacco and wherein carbon particles are incorporated (US-A': col. 7, l. 61).

The additional feature of claim 2 cannot be considered as involving an inventive step since carbon particles are commonly from vegetable origin.

The same objection as against product claim 1 can be made against method claim 5 and claim 8.

Dependent claims 6 and 7 do not contain any additional features which, in combination with the features of claim 5 to which they refer, meet the requirements of the PCT in respect of inventive step.

- 2). The combination of the features of one dependent claim 3 or 4, namely the choice of activated particles from coconut or their mean particle size is neither known from, nor rendered obvious by any document known from the search report.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB99/00260

Ad VII

- 3). The relevant background art disclosed in US-A' should be mentioned in the description (Rule 5.1(a)(ii) PCT).

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
United States Patent and Trademark
Office
Box PCT
Washington, D.C.20231
ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

Date of mailing (day/month/year)

16 September 1999 (16.09.99)

International application No.

PCT/GB99/00260

Applicant's or agent's file reference

DCH/LP5750195

International filing date (day/month/year)

26 January 1999 (26.01.99)

Priority date (day/month/year)

28 January 1998 (28.01.98)

Applicant

SAMPSON, John, Roger

1. The designated Office is hereby notified of its election made:



in the demand filed with the International Preliminary Examining Authority on:

23 August 1999 (23.08.99)



in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was



was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Lazar Joseph Panakal

Telephone No.: (41-22) 338.83.38

P&O
PATENT DEPT.

-2 FEB 2000

PCT

**NOTIFICATION OF THE RECORDING
OF A CHANGE**

(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

MACLEAN, Kenneth, John, Hamson
British American Tobacco
(Investments) Limited
Patents Dept.
R&D Centre
Regents Park South
Southampton SO15 8TL
ROYAUME-UNI

Date of mailing (day/month/year)
21 January 2000 (21.01.00)

Applicant's or agent's file reference
DCH/LP5750195

International application No.
PCT/GB99/00260

IMPORTANT NOTIFICATION

International filing date (day/month/year)
26 January 1999 (26.01.99)

1. The following indications appear on record concerning:

☒ the applicant ☐ the inventor ☐ the agent ☐ the common representative

Name and Address

ROTHMANS INTERNATIONAL SERVICES
LIMITED
15 Hill Street
London W1X 7FB
United Kingdom

State of Nationality

GB

State of Residence

GB

Telephone No.

Facsimile No.

Teleprinter No.

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person ☒ the name ☐ the address ☐ the nationality ☐ the residence

Name and Address

BRITISH AMERICAN TOBACCO
(INVESTMENTS) LIMITED
15 Hill Street
London W1X 7FB
United Kingdom

State of Nationality

GB

State of Residence

GB

Telephone No.

Facsimile No.

Teleprinter No.

3. Further observations, if necessary:

Please furnish a power of attorney from new applicant.

4. A copy of this notification has been sent to:

☒ the receiving Office ☐ the designated Offices concerned
☐ the International Searching Authority ☒ the elected Offices concerned
☒ the International Preliminary Examining Authority ☐ other:

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Athina Nickitas-Etienne

Telephone No.: (41-22) 338.83.38

PCT
 PATENTS DEPT.
 DATE 20 NOV 1999
 (PCT Rule 92bis.1 and
 Administrative Instructions, Section 422)

PCT

From the INTERNATIONAL BUREAU

To:

MACLEAN, Kenneth, John, Hamson
 British American Tobacco
 (Investments) Limited
 Patents Dept.
 R&D Centre
 Regents Park South
 Southampton SO15 8TL
 ROYAUME-UNI

Date of mailing (day/month/year)
 22 November 1999 (22.11.99)

Applicant's or agent's file reference
 DCH/LP5750195

International application No.
 PCT/GB99/00260

IMPORTANT NOTIFICATION

International filing date (day/month/year)
 26 January 1999 (26.01.99)

1. The following indications appeared on record concerning:

☐ the applicant
 ☐ the inventor
 ☒ the agent
 ☐ the common representative

Name and Address

HARRISON, David, C:
 Mewburn Ellis
 York House
 23 Kingsway
 London WC2B 6HP
 United Kingdom

State of Nationality

State of Residence

Telephone No.

0171 240 4405

Facsimile No.

+44 171 240 9339

Teleprinter No.

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☒ the person
 ☒ the name
 ☒ the address
 ☐ the nationality
 ☐ the residence

Name and Address

MACLEAN, Kenneth, John, Hamson
 British American Tobacco
 (Investments) Limited
 Patents Dept.
 R&D Centre
 Regents Park South
 Southampton SO15 8TL
 United Kingdom

State of Nationality

State of Residence

Telephone No.

44 1703 777155

Facsimile No.

44 1703 779715

Teleprinter No.

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

☒ the receiving Office
 ☐ the designated Offices concerned
☐ the International Searching Authority
 ☒ the elected Offices concerned
☒ the International Preliminary Examining Authority
 ☐ other:

The International Bureau of WIPO
 34, chemin des Colombettes
 1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Ingrid Aulich

Telephone No.: (41-22) 338.83.38

PCT

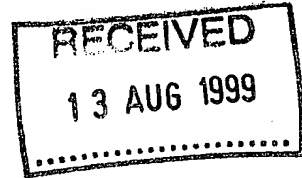
From the INTERNATIONAL BUREAU

**NOTICE INFORMING THE APPLICANT OF THE
COMMUNICATION OF THE INTERNATIONAL
APPLICATION TO THE DESIGNATED OFFICES**

(PCT Rule 47.1(c), first sentence)

To:

HARRISON, David, C.
Mewburn Ellis
York House
23 Kingsway
London WC2B 6HP
ROYAUME-UNI



Date of mailing (day/month/year) 05 August 1999 (05.08.99)		
Applicant's or agent's file reference DCH/LP5750195		IMPORTANT NOTICE
International application No. PCT/GB99/00260	International filing date (day/month/year) 26 January 1999 (26.01.99)	Priority date (day/month/year) 28 January 1998 (28.01.98)
Applicant ROTHMANS INTERNATIONAL SERVICES LIMITED et al		

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:
AU,CN,EP,IL,JP,KP,KR,US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:

AL,AM,AP,AT,AZ,BA,BB,BG,BR,BY,CA,CH,CU,CZ,DE,DK,EA,EE,ES,FI,GB,GD,GE,GH,GM,HR,HU,
ID,IN,IS,KE,KG,KZ,LC,LK,LR,LS,LT,LU,LV,MD,MG,MK,MN,MW,MX,NO,NZ,OA,PL,PT,RO,RU,SD,
SE,SG,SI,SK,SL,TJ,TM,TR,TT,UA,UG,UZ,VN,YU,ZW

The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on
05 August 1999 (05.08.99) under No. WO 99/38396

REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 740.14.35	Authorized officer J. Zahra Telephone No. (41-22) 338.83.38
--	---

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

MACLEAN, Kenneth, John, Hamson
British American Tobacco
(Investments) Limited
R & D Centre
Regents Park Road
GB - Southampton SO15 8TL
GRANDE BRETAGNE

R&D
PATENTS DEPT.

DATE 11 MAY 2000
PCT

FOLIO:

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing
(day/month/year) 09.05.2000

Applicant's or agent's file reference
DCH/LP5750195

IMPORTANT NOTIFICATION

International application No.
PCT/GB99/00260

International filing date (day/month/year)
26/01/1999

Priority date (day/month/year)
28/01/1998

Applicant
ROTHMANS INTERNATIONAL SERVICES LIMITED et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/

 European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized officer

Riebel, O

Tel. +49 89 2399-2967





PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference DCH/LP5750195	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/GB99/00260	International filing date (day/month/year) 26/01/1999	Priority date (day/month/year) 28/01/1998
International Patent Classification (IPC) or national classification and IPC A24B15/28		
Applicant ROTHMANS INTERNATIONAL SERVICES LIMITED et al.		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>		
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input checked="" type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>		
Date of submission of the demand 23/08/1999	Date of completion of this report 09.05.2000	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Pille, S Telephone No. +49 89 2399 2097 	

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB99/00260

I. Basis of the report

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

Description, pages:

1-10 as originally filed

Claims, No.:

1-12 as originally filed

Drawings, sheets:

1/1 as originally filed

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB99/00260

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims 1-8
	No: Claims
Inventive step (IS)	Yes: Claims 3, 4
	No: Claims 1, 2, 5-8
Industrial applicability (IA)	Yes: Claims 1-8
	No: Claims

2. Citations and explanations

see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

ad V

- 1). The present application does not meet the requirements of Article 33(3) PCT, because the subject-matter of claim 1 is not inventive.

GB-A-1348580 discloses a smoking article (claim 1) having a tobacco rod (claim 10: cigarette) which comprises a blend of shredded (p. 2, l. 23: cut; p. 3, l. 31: shredded) tobacco and shredded reconstituted tobacco sheet (p. 1, l. 13-17; claim 8), the reconstituted tobacco sheet containing activated carbon particles (p. 1, l. 20), and a wrapper around the tobacco rod (claim 10: cigarette).

The subject-matter of claim 1 differs therefrom in that it is specified that the wrapper has a permeability of 20 CORESTA or greater. In the claim it is not specified whether net or inherent permeability is meant.

This difference cannot be considered as inventive since it is known from US-A-5056537 (claim 4: net permeability > 50 CORESTA) that it is advantageous to use such wrappers. It is considered that the skilled man would readily combine both cited documents since both relate to smoking articles having a blend of tobacco and reconstituted tobacco and wherein carbon particles are incorporated (US-A': col. 7, l. 61).

The additional feature of claim 2 cannot be considered as involving an inventive step since carbon particles are commonly from vegetable origin.

The same objection as against product claim 1 can be made against method claim 5 and claim 8.

Dependent claims 6 and 7 do not contain any additional features which, in combination with the features of claim 5 to which they refer, meet the requirements of the PCT in respect of inventive step.

- 2). The combination of the features of one dependent claim 3 or 4, namely the choice of activated particles from coconut or their mean particle size is neither known from, nor rendered obvious by any document known from the search report.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB99/00260

Ad VII

- 3). The relevant background art disclosed in US-A' should be mentioned in the description (Rule 5.1(a)(ii) PCT).

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING
OF A CHANGE(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

MACLEAN, Kenneth, John, Hamson
British American Tobacco
(Investments) Limited
Patents Dept.
R&D Centre
Regents Park South
Southampton SO15 8TL
ROYAUME-UNI

Date of mailing (day/month/year) 22 November 1999 (22.11.99)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference DCH/LP5750195	
International application No. PCT/GB99/00260	International filing date (day/month/year) 26 January 1999 (26.01.99)

1. The following indications appeared on record concerning:

☐ the applicant ☐ the inventor ☒ the agent ☐ the common representative

Name and Address HARRISON, David, C. Mewburn Ellis York House 23 Kingsway London WC2B 6HP United Kingdom	State of Nationality	State of Residence
	Telephone No. 0171 240 4405	
	Facsimile No. +44 171 240 9339	
	Teleprinter No.	

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☒ the person ☒ the name ☒ the address ☐ the nationality ☐ the residence

Name and Address MACLEAN, Kenneth, John, Hamson British American Tobacco (Investments) Limited Patents Dept. R&D Centre Regents Park South Southampton SO15 8TL United Kingdom	State of Nationality	State of Residence
	Telephone No. 44 1703 777155	
	Facsimile No. 44 1703 779715	
	Teleprinter No.	

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

☒ the receiving Office ☐ the designated Offices concerned
☐ the International Searching Authority ☒ the elected Offices concerned
☒ the International Preliminary Examining Authority ☐ other:

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Ingrid Aulich
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING OF A CHANGE

(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

MACLEAN, Kenneth, John, Hamson
British American Tobacco
(Investments) Limited
Patents Dept.
R&D Centre
Regents Park South
Southampton SO15 8TL
ROYAUME-UNI

Date of mailing (day/month/year) 29 June 2000 (29.06.00)	
Applicant's or agent's file reference DCH/LP5750195	IMPORTANT NOTIFICATION
International application No. PCT/GB99/00260	International filing date (day/month/year) 26 January 1999 (26.01.99)

1. The following indications appeared on record concerning: <input checked="" type="checkbox"/> the applicant <input type="checkbox"/> the inventor <input type="checkbox"/> the agent <input type="checkbox"/> the common representative		
Name and Address BRITISH AMERICAN TOBACCO (INVESTMENTS) LIMITED 15 Hill Street London W1X 7FB United Kingdom	State of Nationality GB	State of Residence GB
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	
2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning: <input type="checkbox"/> the person <input type="checkbox"/> the name <input checked="" type="checkbox"/> the address <input type="checkbox"/> the nationality <input type="checkbox"/> the residence		
Name and Address BRITISH AMERICAN TOBACCO (INVESTMENTS) LIMITED Globe House 1 Water Street London WC2R 3LA United Kingdom	State of Nationality GB	State of Residence GB
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	
3. Further observations, if necessary:		
4. A copy of this notification has been sent to: <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> the receiving Office <input type="checkbox"/> the International Searching Authority <input type="checkbox"/> the International Preliminary Examining Authority </div> <div> <input type="checkbox"/> the designated Offices concerned <input checked="" type="checkbox"/> the elected Offices concerned <input type="checkbox"/> other: </div> </div>		

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer <div style="text-align: center; font-size: 1.2em;">Ting Zhao</div> Telephone No.: (41-22) 338.83.38
--	--

PATENT COOPERATION TREATY

PCT

**NOTIFICATION OF THE RECORDING
OF A CHANGE**

(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

MACLEAN, Kenneth, John, Hamson
British American Tobacco
(Investments) Limited
Patents Dept.
R&D Centre
Regents Park South
Southampton SO15 8TL
ROYAUME-UNI

Date of mailing (day/month/year) 29 June 2000 (29.06.00)	
Applicant's or agent's file reference DCH/LP5750195	IMPORTANT NOTIFICATION
International application No. PCT/GB99/00260	International filing date (day/month/year) 26 January 1999 (26.01.99)

1. The following indications appeared on record concerning: <input checked="" type="checkbox"/> the applicant <input type="checkbox"/> the inventor <input type="checkbox"/> the agent <input type="checkbox"/> the common representative			
Name and Address BRITISH AMERICAN TOBACCO (INVESTMENTS) LIMITED 15 Hill Street London W1X 7FB United Kingdom		State of Nationality GB	State of Residence GB
		Telephone No.	
		Facsimile No.	
		Teleprinter No.	
2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning: <input type="checkbox"/> the person <input type="checkbox"/> the name <input checked="" type="checkbox"/> the address <input type="checkbox"/> the nationality <input type="checkbox"/> the residence			
Name and Address BRITISH AMERICAN TOBACCO (INVESTMENTS) LIMITED Globe House 1 Water Street London WC2R 3LA United Kingdom		State of Nationality GB	State of Residence GB
		Telephone No.	
		Facsimile No.	
		Teleprinter No.	
3. Further observations, if necessary:			
4. A copy of this notification has been sent to: <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> the receiving Office <input type="checkbox"/> the International Searching Authority <input type="checkbox"/> the International Preliminary Examining Authority </div> <div> <input type="checkbox"/> the designated Offices concerned <input checked="" type="checkbox"/> the elected Offices concerned <input type="checkbox"/> other: </div> </div>			

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Ting Zhao Telephone No.: (41-22) 338.83.38
--	--

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING OF A CHANGE

(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

MACLEAN, Kenneth, John, Hamson
British American Tobacco
(Investments) Limited
Patents Dept.
R&D Centre
Regents Park South
Southampton SO15 8TL
ROYAUME-UNI

Date of mailing (day/month/year) 21 January 2000 (21.01.00)	
Applicant's or agent's file reference DCH/LP5750195	IMPORTANT NOTIFICATION
International application No. PCT/GB99/00260	International filing date (day/month/year) 26 January 1999 (26.01.99)

1. The following indications appeared on record concerning: <input checked="" type="checkbox"/> the applicant <input type="checkbox"/> the inventor <input type="checkbox"/> the agent <input type="checkbox"/> the common representative		
Name and Address ROTHMANS INTERNATIONAL SERVICES LIMITED 15 Hill Street London W1X 7FB United Kingdom	State of Nationality GB	State of Residence GB
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	
2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning: <input type="checkbox"/> the person <input checked="" type="checkbox"/> the name <input type="checkbox"/> the address <input type="checkbox"/> the nationality <input type="checkbox"/> the residence		
Name and Address BRITISH AMERICAN TOBACCO (INVESTMENTS) LIMITED 15 Hill Street London W1X 7FB United Kingdom	State of Nationality GB	State of Residence GB
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	
3. Further observations, if necessary: Please furnish a power of attorney from new applicant.		
4. A copy of this notification has been sent to: <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> the receiving Office <input type="checkbox"/> the International Searching Authority <input checked="" type="checkbox"/> the International Preliminary Examining Authority </div> <div> <input type="checkbox"/> the designated Offices concerned <input checked="" type="checkbox"/> the elected Offices concerned <input type="checkbox"/> other: </div> </div>		

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer <div style="text-align: right;">Athina Nickitas-Etienne</div> Telephone No.: (41-22) 338.83.38
--	---

INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No
PCT/GB 99/00260

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 1348580	A	20-03-1974	AU 4252572	22-11-1973
			BE 784229	18-09-1972
			CA 961367	21-01-1975
			CH 554653	15-10-1974
			DE 2227833	15-02-1973
			DK 130037	16-12-1974
			FI 51756	31-12-1976
			NL 7207771	13-12-1972
			US 3805803	23-04-1974
			ZA 7203459	28-03-1973
GB 1512352	A	01-06-1978	NONE	
US 5056537	A	15-10-1991	NONE	
EP 378774	A	25-07-1990	US 4942888	24-07-1990
			JP 2283271	20-11-1990
			US 5092353	03-03-1992

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 1348580 A	20-03-1974	AU 4252572 A	22-11-1973
		BE 784229 A	18-09-1972
		CA 961367 A	21-01-1975
		CH 554653 A	15-10-1974
		DE 2227833 A	15-02-1973
		DK 130037 B	16-12-1974
		FI 51756 B	31-12-1976
		NL 7207771 A	13-12-1972
		US 3805803 A	23-04-1974
		ZA 7203459 A	28-03-1973
GB 1512352 A	01-06-1978	NONE	
US 5056537 A	15-10-1991	NONE	
EP 378774 A	25-07-1990	US 4942888 A	24-07-1990
		JP 2283271 A	20-11-1990
		US 5092353 A	03-03-1992

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB 99/00260

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 A24B15/28 A24B15/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 A24B A24D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB 1 348 580 A (BRITISH AMERICAN TOBACCO COMPANY LIMITED) 20 March 1974 cited in the application see the whole document	1-5
A	GB 1 512 352 A (IMPERIAL GROUP LIMITED) 1 June 1978 cited in the application see the whole document	1-4
A	US 5 056 537 A (BROWN THOMAS W ET AL) 15 October 1991 see column 9, line 11 - line 39; claims	1,5,8
A	EP 0 378 774 A (RJ REYNOLDS TOBACCO COMPANY) 25 July 1990 cited in the application see claims	

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
 "E" earlier document but published on or after the international filing date
 "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
 "O" document referring to an oral disclosure, use, exhibition or other means
 "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
 "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
 "&" document member of the same patent family

Date of the actual completion of the international search

27 April 1999

Date of mailing of the international search report

07/05/1999

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Lepretre, F